

***ELYMANA KOZHEVNIKOVII* ZACHVATKIN (HEMIPTERA:
CICADELLIDAE) IN BRITAIN: IDENTIFICATION,
DISTRIBUTION AND HABITAT**

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ABSTRACT

The cicadellid leafhopper species *Elymana kozhevnikovi* Zachvatkin is brought forward as a new British species. It was recorded in 1995 and 1996 from sites in the Scottish borders and from Northumberland in northern England and this paper provides information on the identification of the species, its known distribution and its habitat in Britain.

INTRODUCTION

Elymana kozhevnikovi Zachvatkin was announced as a British species in a newsletter of the Auchenorrhyncha recording scheme (Stewart, 1996), when specimens caught by M. D. Eyre in southern Scotland in 1995 were identified by J. C. Woodward and checked by the national recorder A. J. A. Stewart. These records have been mentioned in work on species (Kirby *et al.*, 2001) and assemblage distribution (Eyre *et al.*, 2001) but no information on identification, exact distribution and habitat in Britain has been published. This paper covers these points and brings forward further records.

IDENTIFICATION

The species closely resembles *Elymana sulphurella* (Zetterstedt) (Le Quesne, 1969), with the only reliable diagnostic separation character on part of the male genitalia. Figure 1 shows the male pygofer lobes of *E. sulphurella* and *E. kozhevnikovi* (adapted from Ossiannilsson, 1983). The dorsal (inner) side of *E. kozhevnikovi* pygofer lobes have a comb of stout denticles, whilst there is only a thin row of denticles on the lobes of *E. sulphurella*. Specimens are in the collections of J. C. Woodward and of the Entomology Department of Liverpool Museum at the National Museums and Galleries on Merseyside.

DISTRIBUTION AND HABITAT

This is, in Scandinavia, a species of woods, scrubland, damp meadows and sandy areas recorded in Sweden but not Denmark or Norway by Ossiannilsson (1983). It was first found in Britain in the Scottish borders on the Langholm–Newcastleton Hills SSSI, in vice-county 72 (National grid reference, NY394866), in August 1995 and again in August 1996 (NY394866 and NY392865) using pitfall traps and a suction sampler (Stewart & Wright, 1995). It occurred on the grassy sides of two streams cutting through peat moorland. These sites were on mineral soil, unlike the surrounding peat, on well-drained pronounced slopes. These conditions provided a soil for fine grass species, usually mixed with bracken, within large areas of heather

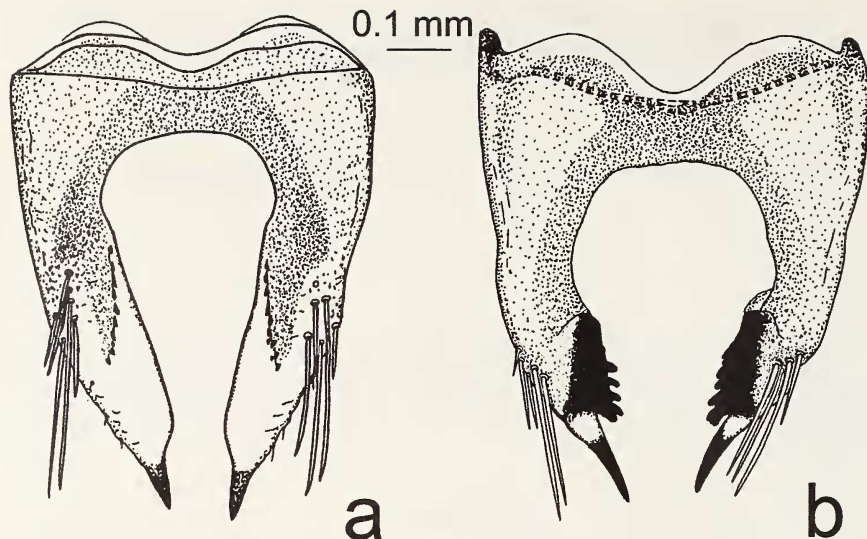


Figure 1. Male pygofers of (a) *Elymana sulphurella* and (b) *Elymana kozhevnikovi* showing the comb of stout denticles on the dorsal (inner) side of the lobes of *E. kozhevnikovi* (adapted from Ossiannilsson, 1983).

and coarse moorland grasses. Other Auchenorrhyncha species present on the same sites were *Adarrus ocellaris* (Fallén), *Aphrodes albifrons* (Linnaeus), *A. bifasciatus* Linnaeus), *A. makarovi* Zachvatkin, *Cicadella viridis* (Linnaeus), *Conomelus anceps* (Germar), *Deltocephalus pulicaris* (Fallén), *Dicranotropis hamata* (Boheman), *Diplocolenus abdominalis* (Fabricius), *Jassargus distinguendus* (Flor), *J. sursumflexus* (Thén), *Javesella discolor* (Boheman), *Macustus grisescens* (Zetterstedt), *Muellerianella fairmairei* (Perris), *Philaenus spumarius* (Linnaeus), *Psammotettix nodosus* (Ribaut), *Streptanus aemulans* (Kirschbaum) and *S. sordidus* (Zetterstedt) (nomenclature follows that of Le Quesne & Payne, 1981).

Elymana kozhevnikovi was also captured, again by M. D. Eyre, in August 1996 from two patchy woodland sites in the valley of the River Coquet, draining the Cheviot Hills, providing the first English records. The site at Linbriggs (NT892066) (VC 68) was very steep with soil between scree. The ground vegetation was mainly grasses and was partially shaded by scattered ash trees. The steep bank led to grass moorland and the other Auchenorrhyncha species found there were *Aphrodes flavostriatus* (Donovan), *A. bifasciatus*, *A. makarovi*, *D. abdominalis*, *J. distinguendus*, *Neophilaenus lineatus* (Linnaeus), *P. spumarius*, *Streptanus marginatus* (Kirschbaum) *S. aemulans*, *S. sordidus* and *Thamnotettix confinis* (Zetterstedt). Grasslees Wood (NY953974) (VC 67) was on a less steep bank but with mineral soil below peat moorland. Shade was provided by oak and ash trees and there was some bracken. The other leaf- and planthopper species present were *A. ocellaris*, *A. albifrons*, *A. bifasciatus*, *A. makarovi*, *Arocephalus punctum* (Flor), *Arthaldeus pascuellus* (Fallén), *C. viridis*, *C. anceps*, *Conosanus obsoletus* (Kirschbaum), *Delphacodes venosus* (Germar), *Dikraneura variata* Hardy, *J. distinguendus*, *M. grisescens*, *M. fairmairei*, *N. lineatus*, *P. spumarius*, *S. aemulans* and *S. sordidus*.

Elymana kozhevnikovi appears to be a species occurring in the marginal land between moorland and more intensive agriculture. It did not occur on any of the upland land cover types in the Scottish borders and we do not have it from any sites in the managed landscape of lowland north-east England. All sites had thin mineral soils, were well-drained, had a degree of shade and were grazed to some extent by either sheep or deer. These habitat preferences generally tally with those given by Ossiannilsson (1983), except that we do not have it from damp meadows.

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BOOK REVIEWS

Butterflies of Cyprus. By Christodoulos Makris. (Nicosia: Bank of Cyprus Cultural Foundation, 2003). 329pp. Hardbound £29.50. ISBN 9963-42-815-0. Softbound £25.80. ISBN 9963-42-817-7.

Finding illustrations of the island's butterfly fauna is a problem which has faced visitors to Cyprus for many years. For one thing, Cyprus has its own endemics, which are rarely mentioned in the popular European field guides, let alone illustrated. Lying at the southeast corner of Europe, Cyprus also has a few Asian and African species such as *Cigaritis acamas* (Klug) (Levantine Leopard) and *Ypthima asterope* (Klug) (African Ringlet), which are also hard to find as illustrations.

At long last, all these problems are solved by a sumptuous new book by Christodoulos Makris. Produced as one of a series of works on the flora and fauna of Cyprus, it has been subsidised by the Bank of Cyprus to enable lavish illustrations of all of the island's butterflies. Its 329 pages describe all 53 species in immense detail, with typically 10 photographs of living examples of ova, larva, pupa and adults of both sexes, showing different colour forms and seasonal variations. The captions give a further insight, by identifying the flora in the picture, which is particularly helpful for visitors who may be seeing the host plants and nectar sources for the first time. A separate section shows an equally comprehensive array of well-labelled set specimens, allowing confident identification and separation of similar species. The text to the main section is well written, yet concise, with all the detail one expects